TIMTRONICS
THERMAL INTERFACE MATERIAL

Data Sheet

NSF H1 Approved.
Registration No: 139292

White Ice 510FG
Food Grade Heat Sink Compound

Product Description

White Ice 510FG is a non-reactive, Silicone, Thermally Conductive food grade thermal grease with a high thermal conductivity and low thermal resistance with a soft, non-flowable consistency. This product is formulated with FDA (Food & Drug Administration) approved ingredients in compliance with CFR, Title 21 paragraph 178.3570 of the FDA guidelines. This product is acceptable as incidental food contact for use in and around food processing areas.

Key Features and Benefits

- ***Good Thermal Performance- (0.80 W/m°k)***
- ***Low Interface Thermal Resistance. – (0.05 °C-In^2 /W)***
- ***Thin Bond lines to*** $\leq$**1 mil.**
- ***Low bleed and evaporation.***

- Non-Toxic.
- Re-workable/Easy to Remove.
- Easy to Apply by Dispensing or Screen Printing/Stencil.

Typical Applications

White Ice 510FG **Heat Sink Compound is applied to the any electronic devices for heat transfer which is located in and around food processing areas**. Also industrial applications include mounting studs of transistors, diodes and silicone controlled rectifiers. In these situations, a small amount of the thermal grease is applied using either the dispensing of screen printing/stencil methods It is also used in mounting semiconductor devices; thermoelectric modules; power transistors and diodes; coupling entire heat generating assemblies to chassis; heat transfer medium on ballasts; thermal joints; thermocouple wells; mounting power resistors; and for any devices where efficient cooling is required in major industries including, electronic (computer, appliance, wireless, etc.), automotive and electrical.

Shelf-Life

White Ice 510FG has a shelf-life of 5 years at room temperature (25°C) in unopened containers. Slight settling of the filler may occur during long-term storage. In this case, it is recommended to re-disperse the filler by hand or mechanical mixing. Refrigerate material at 0-10°C to avoid any settling.

Clean Up

Standard approved clean-up and disposal procedures should be followed in every situation. The use of disposable containers and utensils are recommended whenever possible to simplify and expedite clean-up. However, when disposable containers are impractical, ***White Ice 510FG*** can be removed by cleaning solvents with such as Mineral Spirit (Paint Thinner), Heptane or Isopropyl Alcohol.

Typical Properties

Property	***Value***
Viscosity:	Thixotropic Paste
Specific Gravity, @ 25°C	2.2
Color:	White
Evaporation, @ 200°C, 24 Hrs., %/Wt.	0.6
Thermal Conductivity, (ASTM D5470)	
Cal/Sec. Cm.°C	19 x 10^{-4}
BTU.In/(Hr.Ft^2.°F)	5.5
W/m.°K	**0.80**
Thermal Resistance (°C-In^2 /W)	**0.05**
Electrical Properties: Dielectric strength (ASTM D150) 0.05" gap, V/mil	390
Dielectric constant (ASTM D150) 25°C @ 1,000 Hz.	4.40
Dissipation factor (ASTM D150) 25°C @ 1,000 Hz.	0.0021
Volume Resistivity (ASTM D257) Ohm-cm.	2.8 x 10^{14}
Operating Temperature Range	-55°C to 205°C